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## NOTICE OF ALLOWANCE AND FEE(S) DUE

23373 7590 08/06/2010  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

HU, HENRY S

ART UNIT

PAPER NUMBER

1796

DATE MAILED: 08/06/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,657	12/05/2005	Mihoko Ohashi	Q91414	7239

TITLE OF INVENTION: CURABLE SURFACE MODIFIER AND CURABLE COMPOSITION FOR SURFACE MODIFICATION PREPARED FROM  
SAME:

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	11/08/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

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If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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**Complete and send this form, together with applicable fee(s), to:** Mail **Mail Stop ISSUE FEE**  
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**Alexandria, Virginia 22313-1450**  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

23373 7590 08/06/2010

**SUGHRUE MION, PLLC**  
**2100 PENNSYLVANIA AVENUE, N.W.**  
**SUITE 800**  
**WASHINGTON, DC 20037**

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,657	12/05/2005	Mihoko Ohashi	Q91414	7239

**TITLE OF INVENTION:** CURABLE SURFACE MODIFIER AND CURABLE COMPOSITION FOR SURFACE MODIFICATION PREPARED FROM SAME

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	11/08/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
HU, HENRY S	1796	525-199000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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23373	7590	08/06/2010	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			HU, HENRY S	
			ART UNIT	PAPER NUMBER
			1796	
DATE MAILED: 08/06/2010				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 651 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 651 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# Notice of Allowability

## Application No.

10/559,657

## Examiner

HENRY S. HU

## Applicant(s)

OHASHI ET AL.

## Art Unit

1796

### - The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Supplemental Amendment.
2. ☒ The allowed claim(s) is/are 1,4-6 and 16.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

### THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## DETAILED ACTION

1. This Office Action is in response to a total of three things including: (A) **RCE Request**, (B) **Amendment** filed on February 25, 2010, and (C) **Supplemental amendment** filed on May 4, 2010, which are in response to Final office action filed on December 4, 2009. With such two amendments, **Claim 1 is amended; Claims 2-3 and 7-15 are previously cancelled, while new Claim 16 is added.** To be specific, parent **Claim 1** is now third-time-amended so that the **total numbers of four repeating units  $n1+n2+n3+n4$  is not less than 10.** The support is indeed found bridging pages **17-18** of specification as Applicants alleged.

2. **Two IDS'** (2 pages each) are filed so far. This Application is a **371/PCT/ JP04/007179** with a Japanese priority at June 5, 2003. **Claims 1, 4-6 and 16** with only one independent claim (Claim 1) are now pending. An action follows. See international search report in Applicants' priority paper **WO 2004/108772 A1 to Ohashi et al.**

3. Claim rejections under **Final** Office Action filed on August 4, 2009 are now removed for the reasons given in paragraphs 4-12 thereafter.

### *Allowable Subject Matter*

4. Claims 1, 4-6 and 16 are allowed.

Art Unit: 1796

5. The following is an examiner's statement of reasons for allowance: The above Claims 1, 4-6 and 16 are allowed over the closest references:

6. The limitation of “~~third-time-amended~~” parent Claim 1 in present invention relates to a curable surface modifier comprising a curable fluorine-containing resin (I) which is soluble in general purpose solvents and has a fluorine-content of 0.1 % by weight but no more than 35 % by weight. The resin (I) comprises a fluorine-containing ethylenic polymer (IAB) having a moiety A and a moiety B in at least a part of the same side chain or different side chains thereof, or the resin (I) comprises a fluorine-containing ethylenic polymer (IA) having a moiety A in at least a part of its side chain and a fluorine-containing ethylenic polymer (IB) having a moiety B in at least a part of its side chain,

wherein the moiety A has, at its end, one or two or more polyfluoropolyether chains P represented by the formula (1). With current amendment, the total numbers of four repeating units  $n1+n2+n3+n4$  is not less than 10 (which is originally an integer of 7 to 40).

Wherein the moiety B has one or more self-crosslinkable functional groups Y at its end, and the remaining ethylenic polymer moiety M (which is excluding the moiety A and the moiety B) contains a structural unit of the formula (2) or (3) as specified.

*See other limitations of dependent Claims 4-6 and 16.*

Art Unit: 1796

7. According to “**curable surface modifier (which is a composition)**” of current (amended three times) parent **Claim 1**, the “solvent-soluble” **polymer (resin IAB) or polymer blend mixture (resin IA and Resin IB)** will comprise **three** “moieties” including: (a) **moiety A** which has the structure of **polyfluoropolyether P (wherein  $X^1$  may be H, F or Cl)**, (b) **moiety B** (which is a crosslinkable functional group), and (c) ethylenic polymer **moiety M** (to be connected with moiety A or moiety B as a pendent group in polymer structure). The key point is that with current amendment, the **total numbers of four repeating units  $n1+n2+n3+n4$  is not less than 10 (which is originally an integer of 7 to 40)** in the formula (1).

8. As admitted by Examiner in Final office action at paragraph # **9, the maximum total number of perfluoropolyether (PFPE) units in Ohmori is only at most 6.** Previous 102/103 rejections by the sole reference Ohmori cannot longer stand as follows: This is based on key fact as **the integer 6 is far away from the minimum integer 10.** Actually, the total numbers calculated in Ohmori’s case should not exceed 5, which is even farther than 10. See Applicants’ arguments on page **5** at bottom of Remarks.

9. It is noted by this Examiner that even the reference has fundamentally disclosed most of the elements in the whole structure/length and only a small difference is missing; it will still take a lot of efforts and/or plenty of turn-ups in achieving the claimed structure. Different structure and/or length will result at least somewhat different product with different property. Therefore, the references in combination or alone cannot disclose or suggest such a curable surface modifier as discussed above.

10. In order to be totally distinguished over the prior art references for 103 rejections, Applicants have presented some unexpected results from page 5 in the bottom to page 6 at top of Remarks. For instance, sliding property and stain-proofing property are fairly improved.

11. After further examination and search, the examiner found the following prior art did not teach the claimed limitation: **US 6,906,115 B2 to Hanazawa et al.** only has prepared some PFPE-containing compositions to be useful for surface treatment. The composition comprises: (A) a trisocyanate, (B) a perfluoropolyether “compound” having at least one active hydrogen, and (C) a monomer having active hydrogen and a carbon-carbon double bond. Based on the fact that component (B) is only a compound and thereby not a monomer, Hanazawa’s resulting polymer cannot read on the limitation of parent Claim 1. Therefore, **Hanazawa** fails to teach or fairly suggest the curable surface modifier limitation of present invention.

12. As of the date of this office action, the examiner has not located or identified any reference that can be used singularly or in combination with another reference including the above references to render the present invention anticipated or obvious to one of the ordinary skill in the art. Therefore, the independent **Claim 1** is allowed for the reason listed above. Since the prior art of record fails to teach the present invention, the remaining pending dependent **Claims 4-6 and 16** are passed to issue.

13. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu whose telephone number is (571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Vasu Jagannathan, can be reached on (571) 272-1119. The **fax** number for the organization where this application or proceeding is assigned is **(571) 273-8300** for all regular communications. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Peter D. Mulcahy/  
Primary Examiner, Art Unit 1796

/Henry S. Hu/  
Examiner, Art Unit 1796

July 31, 2010